



0959707.1 2012.04.10

FIG.2A
Prior Art

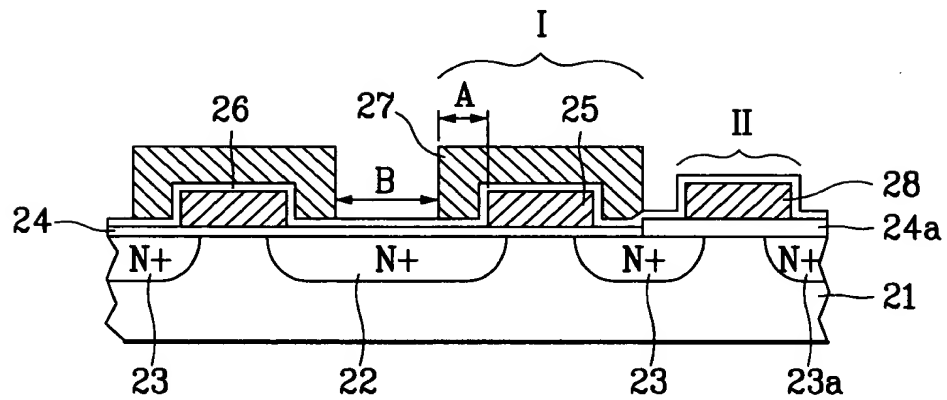


FIG.2B
Prior Art

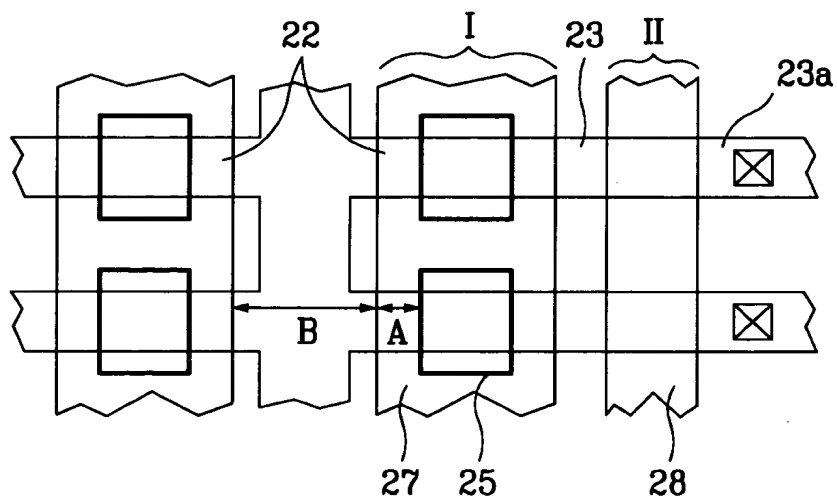


FIG.2C
Prior Art

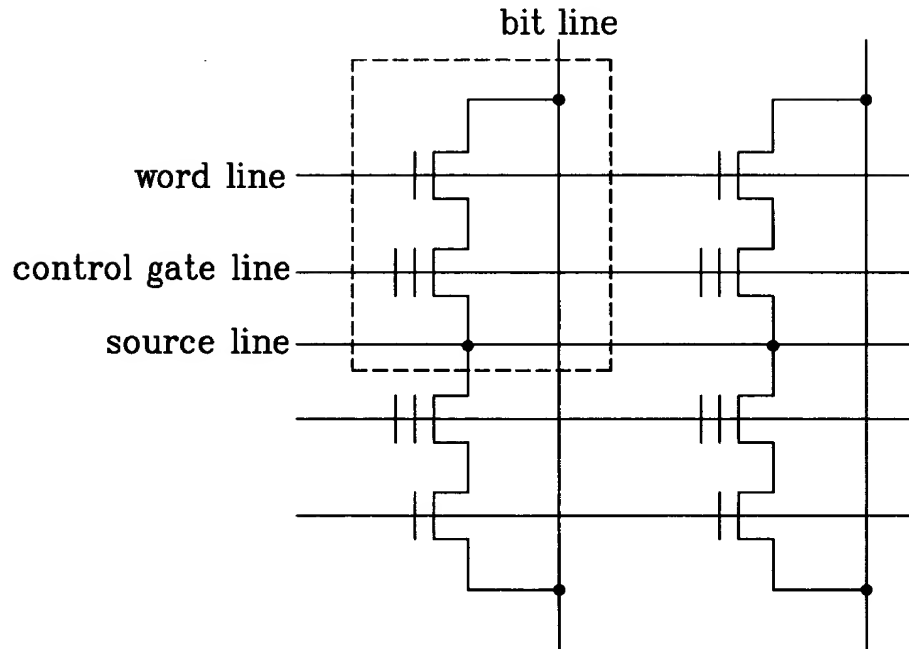
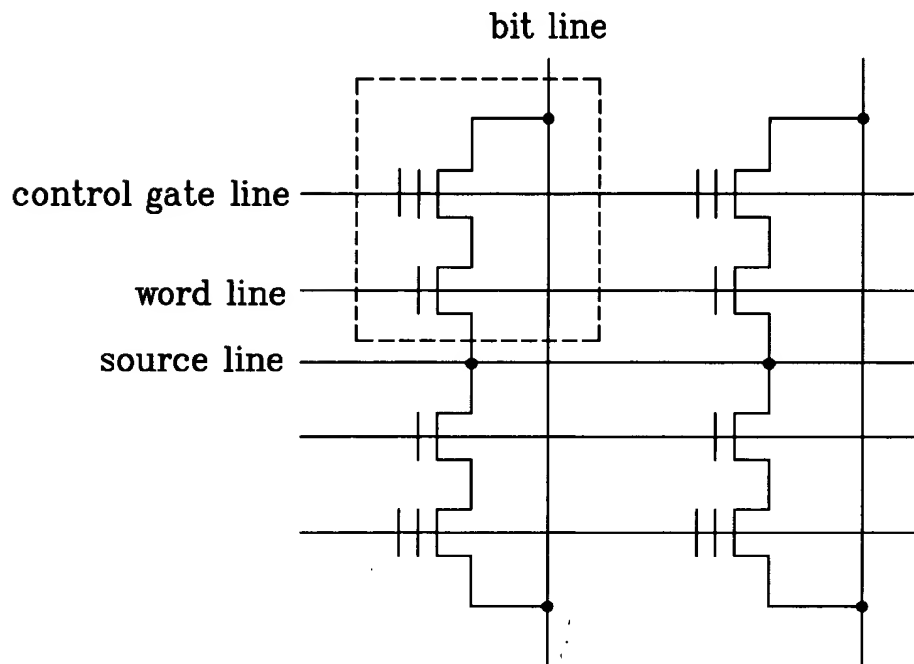


FIG.2D
Prior Art



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FIG. 3A

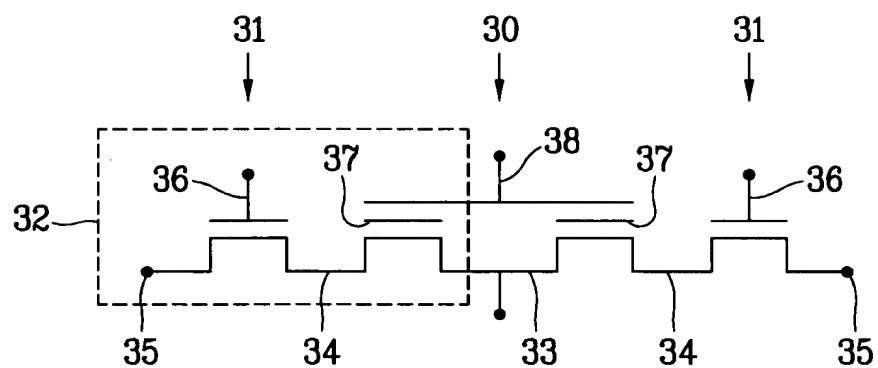


FIG. 3B

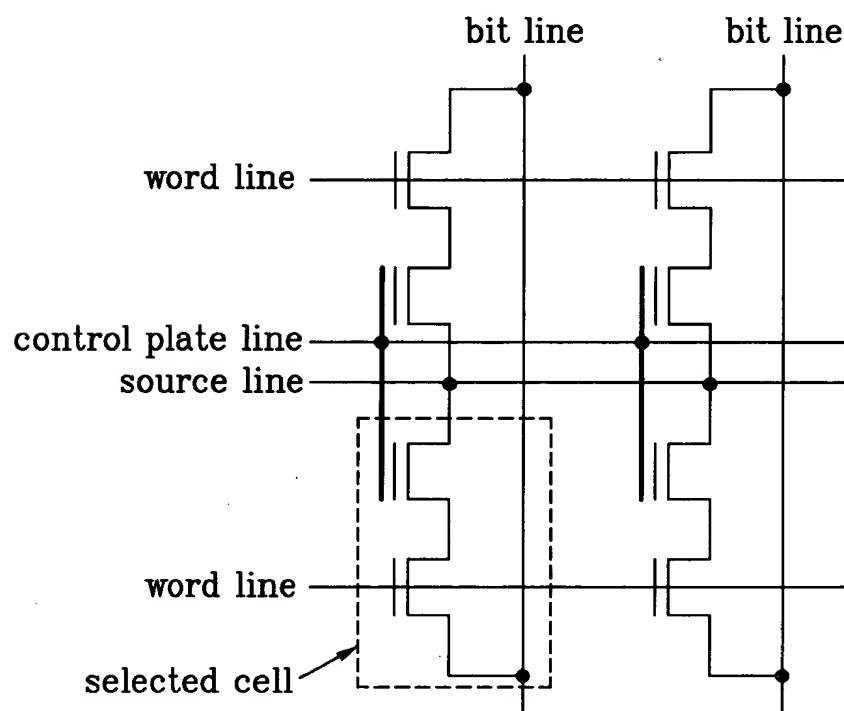


FIG.3C

(UNIT: VOLTS)

	SELECT GATE	CONTROL PLATE	DRAIN	SOURCE	P-SUBP- WELL	DEEP N-WELL	REMARK
PROGRAM	VCC~10	-7~10	2~7	0~2	0	-	
	VCC~10	-7~10	1~6	0~2	0	-5~0	TRIPLE WELL
ERASE	-	-13~-5	-	0~8	0	-	
	-	0	-	7~13	0	-	
	0~VPP OR FLOAT	-13~0	FLOAT OR VPP	FLOAT OR VPP	0	VPP=VCC~13	TRIPLE WELL
READ	VCC~7	0~7	0.5~2	0~1.5	0	-	
	VCC~7	0~7	0.5~2	0~1.5	0	0	TRIPLE WELL

FIG. 3D

(UNIT: VOLTS)

	SELECT GATE (WORD LINE)		SELECTED CONTROL PLATE	DRAIN(BIT LINE)		SELECTED SOURCE	P- SUB WELL	P- WELL	DEEP N-WELL	REMARK
	SELECTED	UN- SELECTED		SELECTED CELL	UN- SELECTED CELL					
PROGRAM	VCC~10	0	-7~10	2~7	-	0~2	0	-	-	
	VCC~10	0	-7~10	1~6	-	0~2	0	-5~0	0	TRIPLE WELL
ERASE	VCC~10	0~VCC OR FLOAT	-10~-3	VCC~10	0 OR FLOAT	0 OR FLOAT	0	-	-	
	7~15	0	0	7~13	0	FLOAT	0	-	-	
READ	VCC~7	0	0~7	0.5~2	-	0~1.5	0	-	-	

FIG. 4A

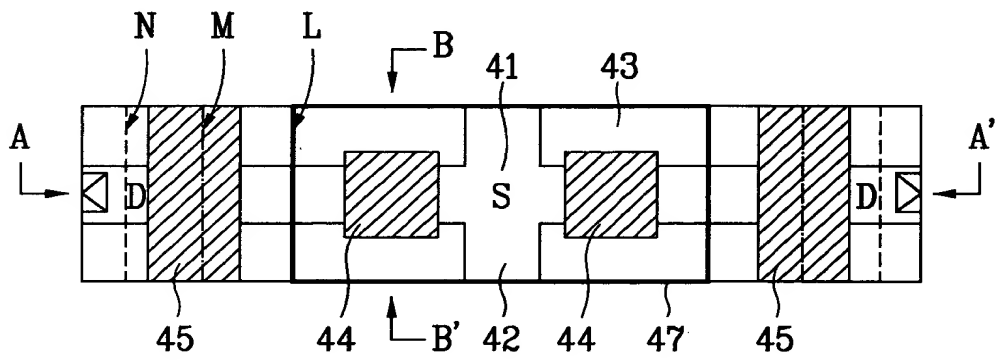


FIG. 4B

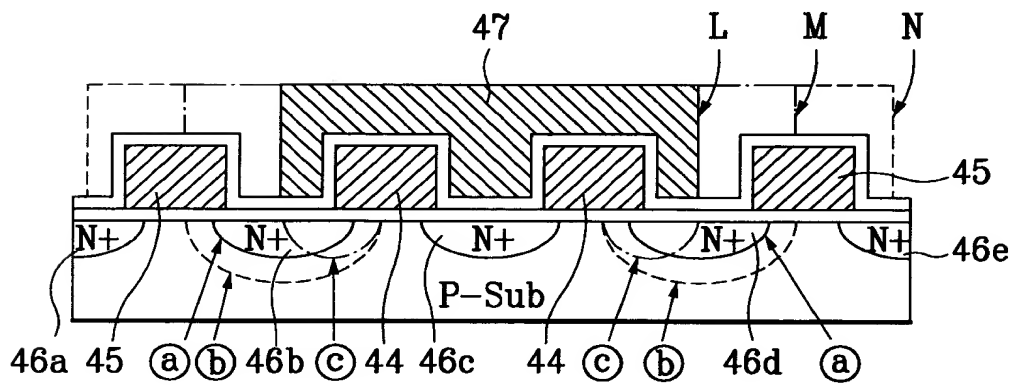


FIG. 4C

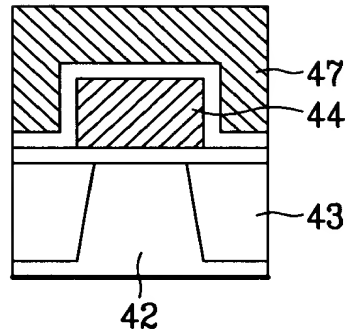


FIG. 4D

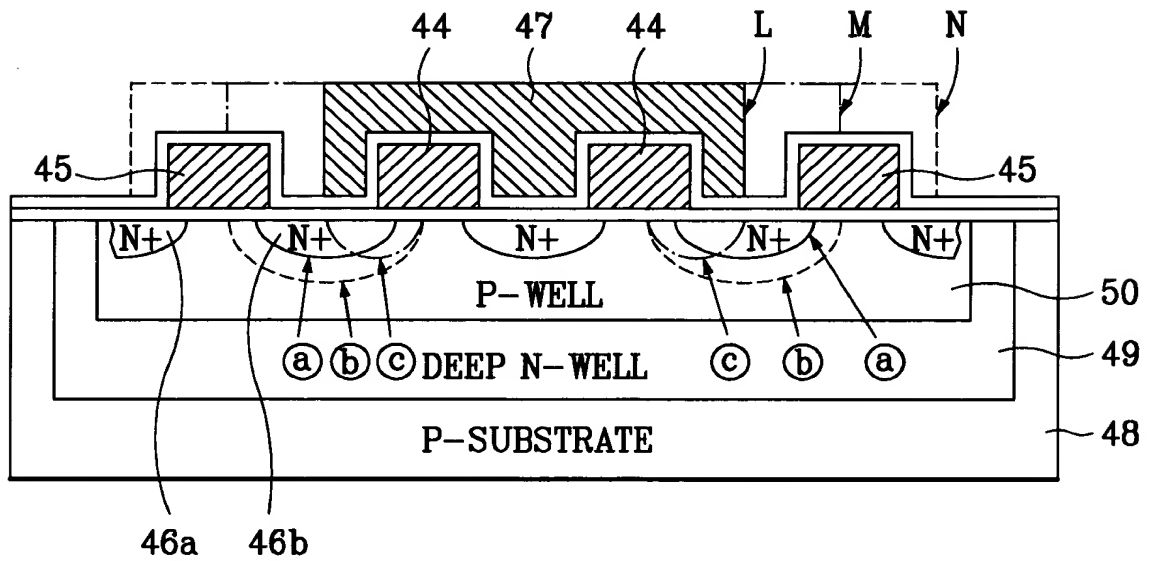


FIG. 5A

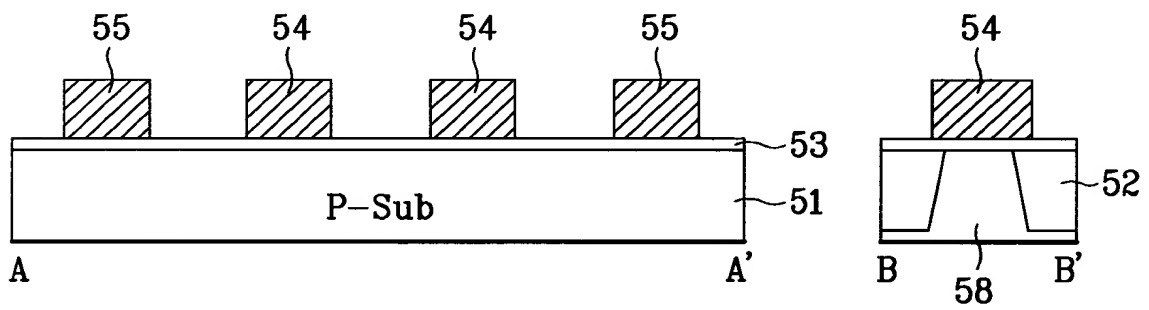
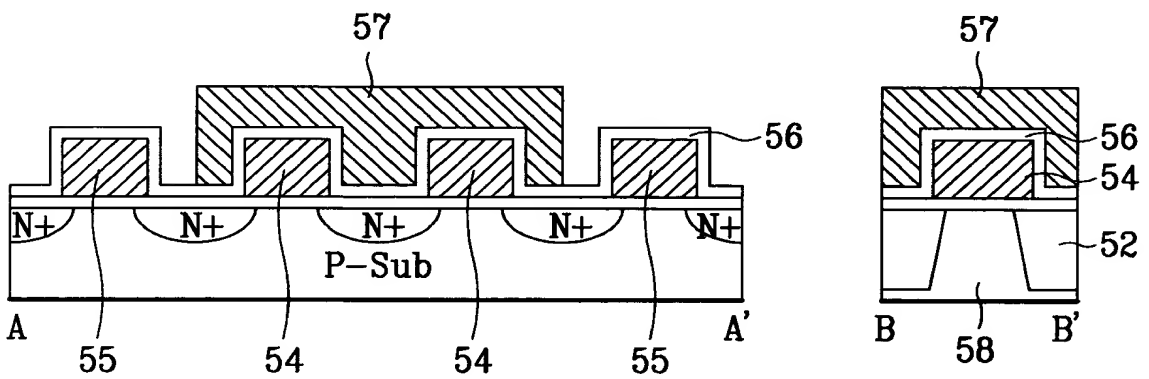


FIG. 5B



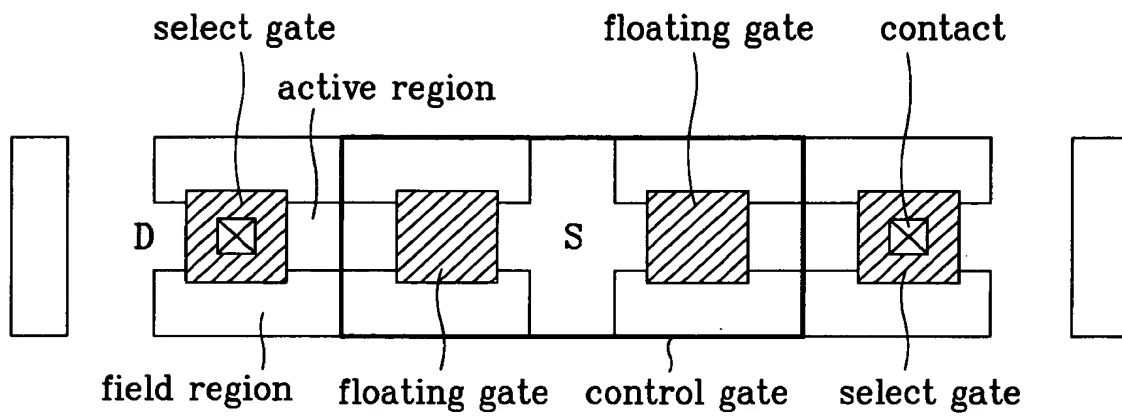


FIG. 6C

(UNIT: VOLTS)

	WORD LINE (SELECTED)	CONTROL PLATE	BIT LINE		SOURCE LINE	P-SUB	P-WELL	DEEP N-WELL	REMARK
			SELECTED	UN- SELECTED					
PROGRAM	VCC~10	-7~10	2~7	VS	VS	0	-	-	
	VCC~10	-7~10	1~6	VS	VS	0	-5~0	0	TRIPLE WELL
ERASE	-	-13~-5	0 OR FLOAT	-	0~8	0	-	-	
	0	0	-	-	8~13	0	-	-	
	0~VPP OR FLOAT	-13~0	VPP OR FLOAT	-	FLOAT OR VPP	0	VPP= VCC~13	VPP	TRIPLE WELL
READ	VCC~7	0~7	0.5~2	VS	VS	0	-	-	

FIG.6D

(UNIT: VOLTS)

	WORD LINE		CONTROL PLATE	BIT LINE		SOURCE LINE	P-SUBP-WELL	DEEP N-WELL	REMARK
	SELECTED	UN- SELECTED		SELECTED	UN- SELECTED				
PROGRAM	VCC~10	0	-7~10	2~7	VS	VS	0		
	VCC~10	0	-7~10	1~6	VS	VS	0	0	TRIPLE WELL
ERASE	VCC~10	0~VCC OR FLOAT	-10~-3	VCC~10	0 OR FLOAT	0 OR FLOAT	0		
	7~15	0	0	7~13	-	FLOAT	0	-	
READ	VCC~7	0	0~7	0.5~2	VS	VS	0		

FIG. 7A

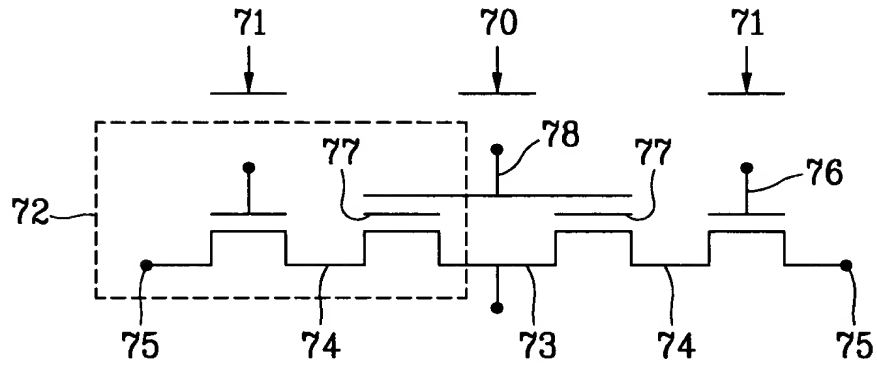


FIG. 7B

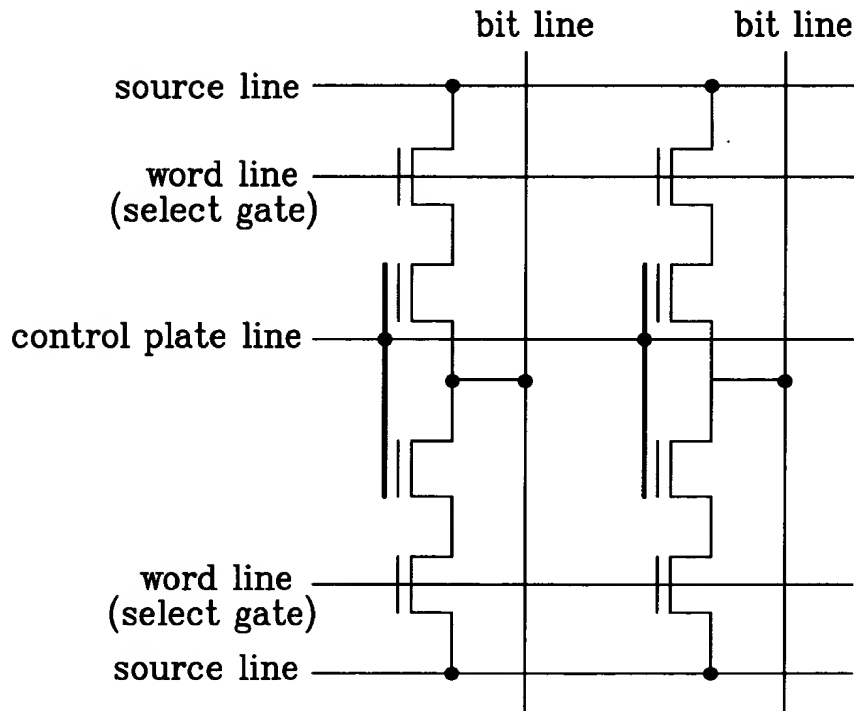


FIG.7C

(UNIT: VOLTS)									
	WORD LINE		CONTROL PLATE	BIT LINE		SELECTED SOURCE LINE	P-SUBP-WELL	DEEP N-WELL	REMARK
	SELECTED	UN- SELECTED		SELECTED	UN- SELECTED				
PROGRAM	VCC~10	0	-7~10	2~7	VS	VS	0	-	
	VCC~10	0	-7~10	1~6	VS	VS	0	-5~0	TRIPLE WELL
ERASE	VCC~	-	-10~-5	0~8	-	-	0	-	
	0	-	0	8~13	-	-	0	-	
	VCC~10	0	-10~-3	0 OR FLOAT		VCC~10	0	-	
	0~VCC OR FLOAT		-13~0	FLOAT OR VPP	-	FLOAT OR VPP	0	VPP= VCC~13	TRIPLE WELL
READ	VCC~7	0	0~7	0.5~2	VS	VS	0	-	

FIG. 7D

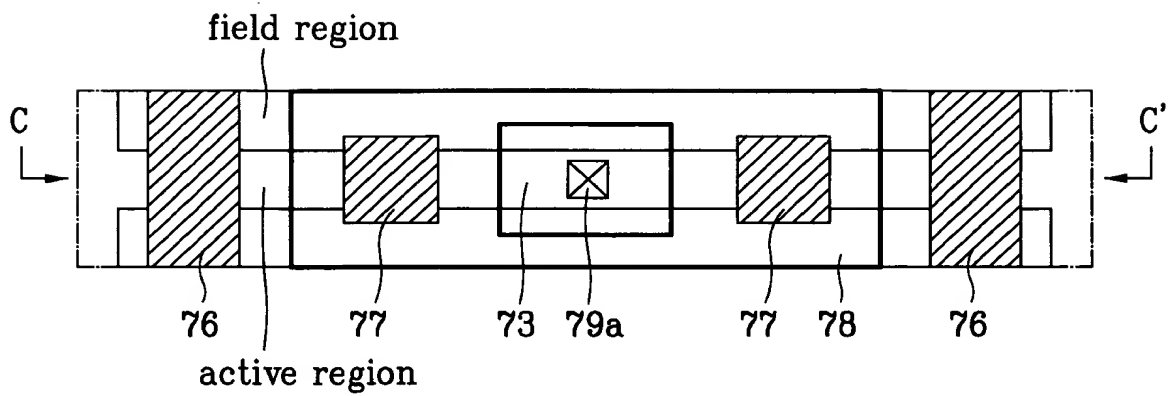


FIG. 7E

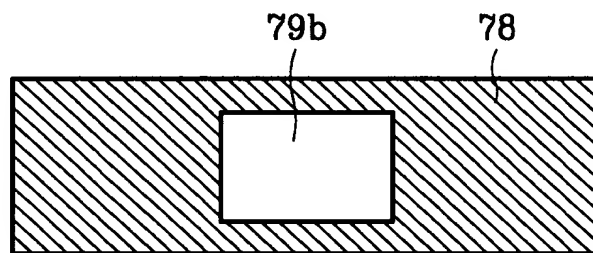


FIG. 7F

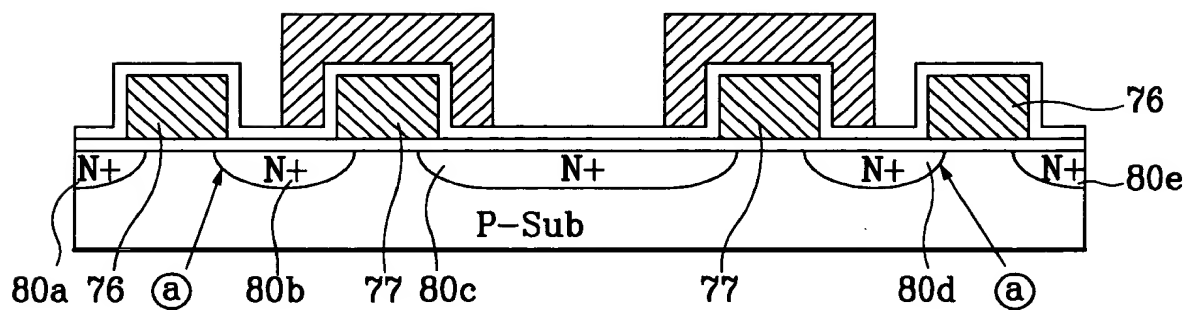


FIG. 8A

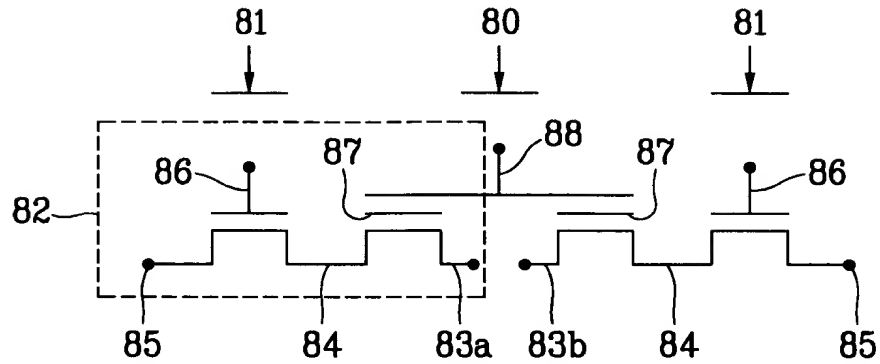
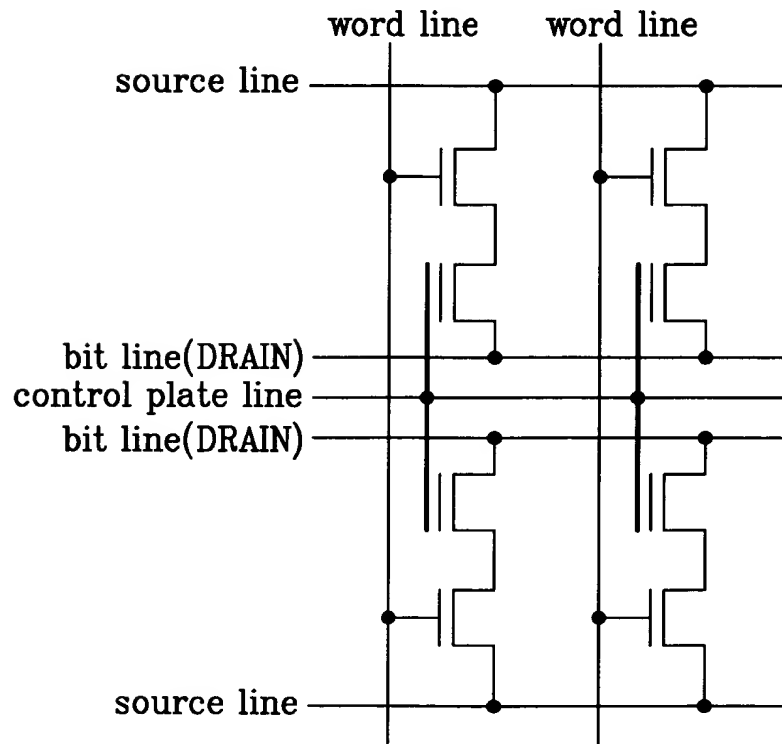
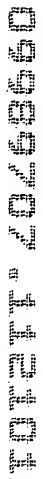
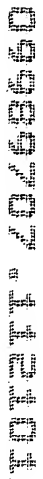


FIG. 8B



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FIG. 9C

(UNIT: VOLTS)

	SELECT GATE	CONTROL PLATE	DRAIN	SOURCE	SUB
PROGRAM	$V_{th} + \alpha$	$-5 \sim 10$	$2 \sim 8$	$0 \sim 2$	0
ERASE	0	$-10 \sim -5$	$0 \sim 8$	—	0
	0	0	$7 \sim 13$	—	0
	$VCC \sim 20V$	$-8 \sim 0$	—	—	—
READ	$VCC \sim 7$	$0 \sim 7$	$0.5 \sim 2$	$0 \sim 1.5$	0

FIG. 9D

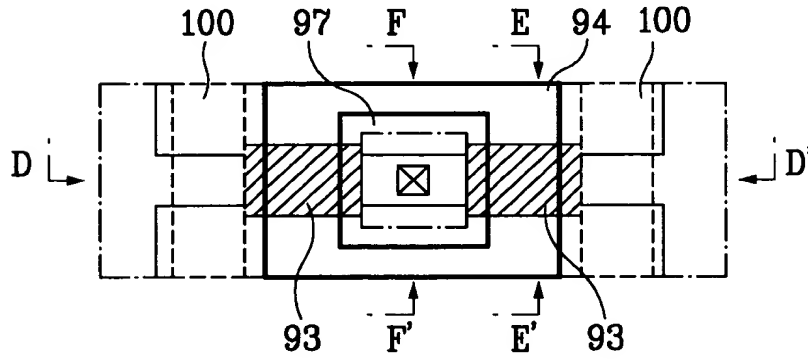


FIG. 9E

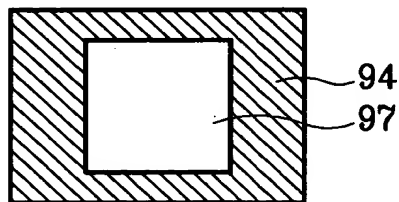


FIG. 9F

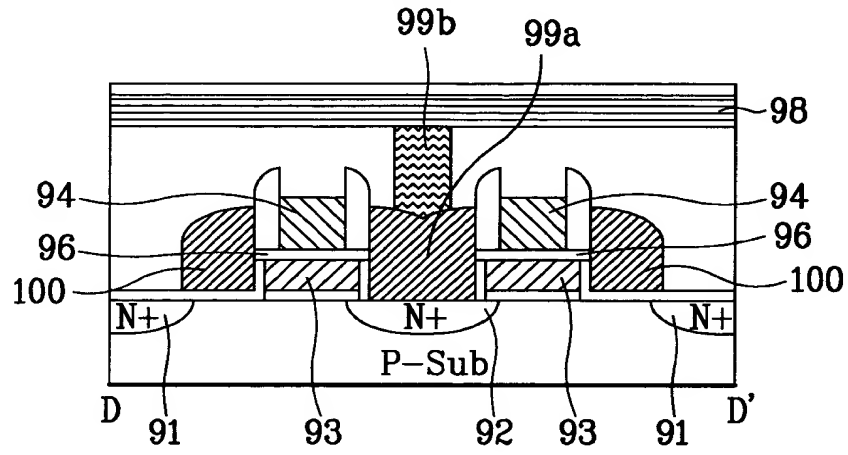


FIG. 9G

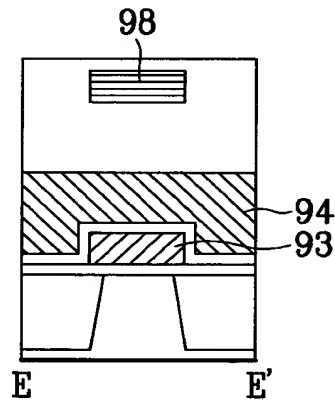


FIG. 9H

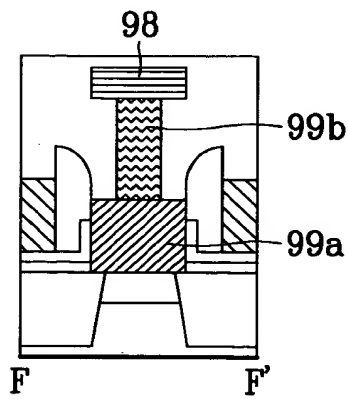


FIG.10A

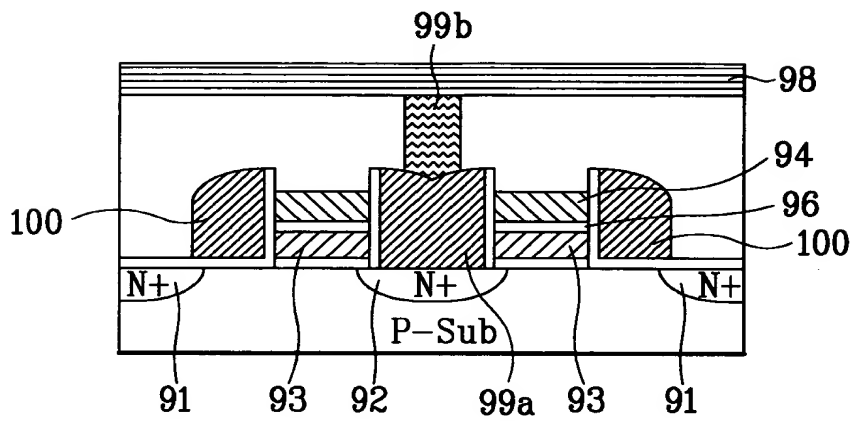
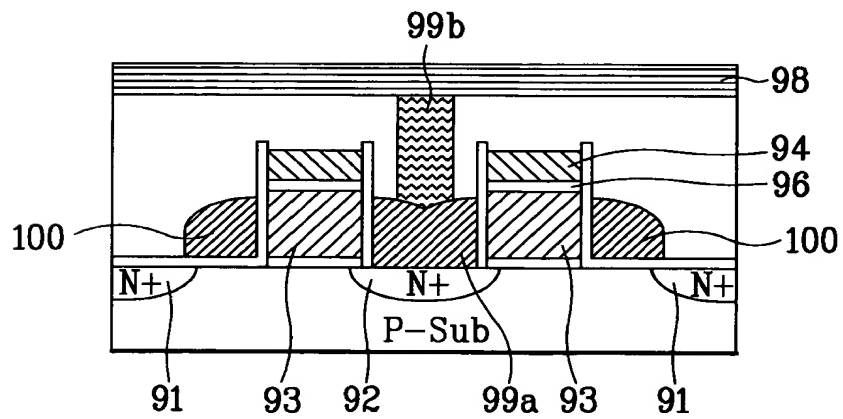


FIG.10B



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FIG.11A

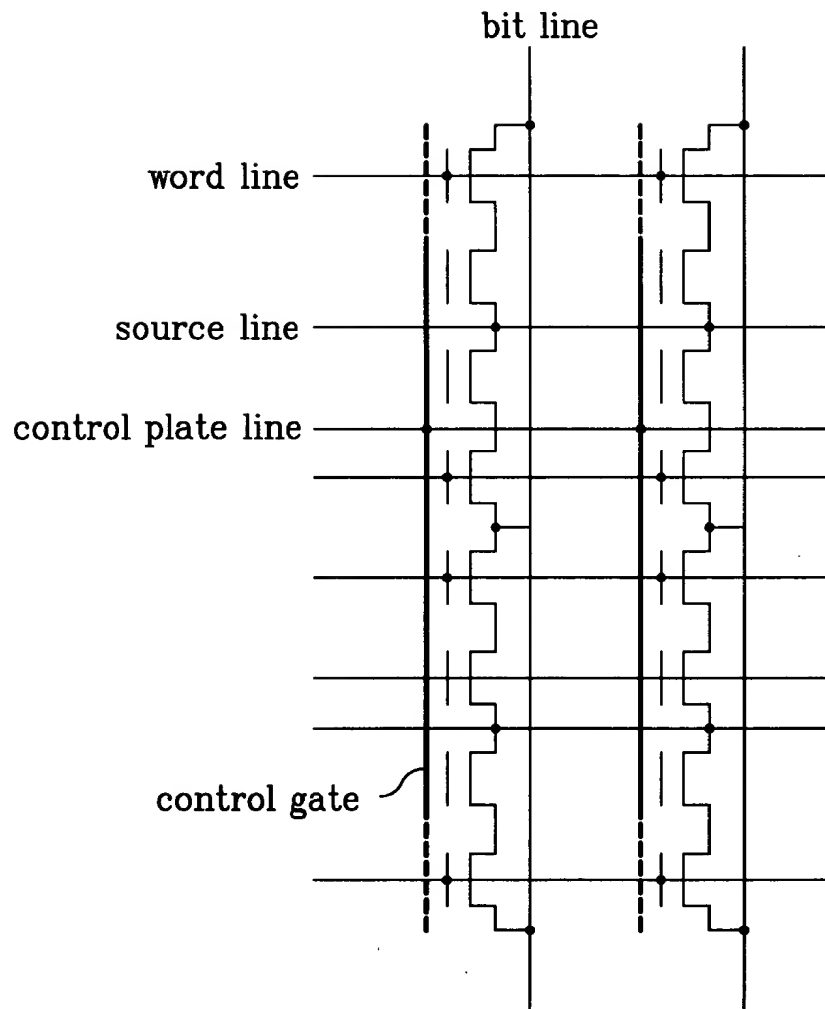


FIG.11B

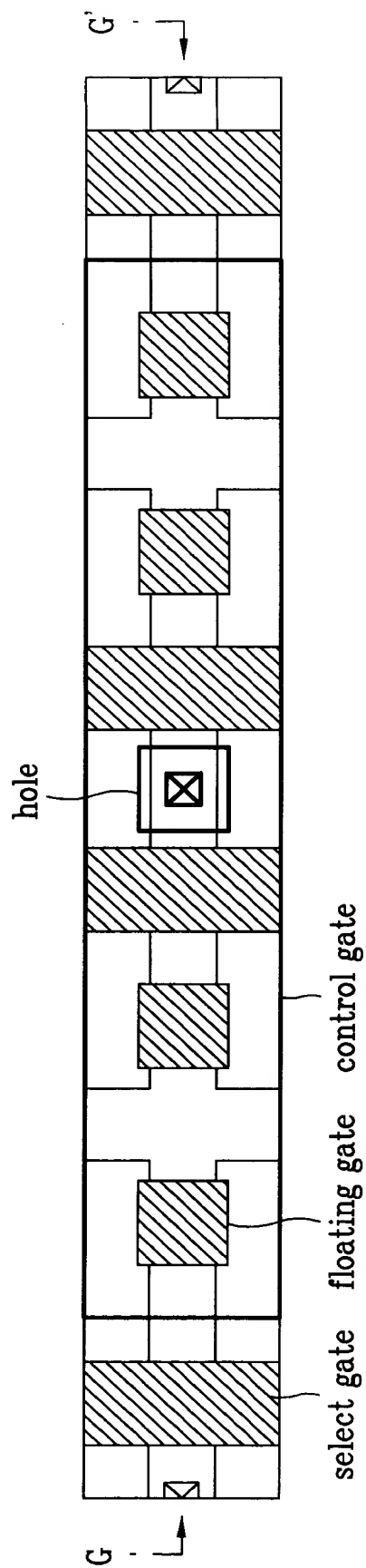


FIG.11C

